

## Claims

1. An ink-jet ink which is substantially free of water, volatile organic solvents and multifunctional (meth)acrylates, comprising at least one monofunctional (meth)acrylate monomer, at least one  $\alpha,\beta$ -unsaturated ether monomer, at least one radical photoinitiator and at least one colouring agent, the ink having a viscosity of less than 50 mPas at 25°C.
2. An ink-jet as claimed in claim 1 which is suitable for printing onto porous substrates.
3. An ink-jet ink as claimed in claim 1 or 2, wherein the ink includes, by weight, from 2 to 15 parts of monofunctional (meth)acrylate monomer to 1 part of  $\alpha,\beta$ -unsaturated ether monomer.
4. An ink-jet ink as claimed in any preceding claim, wherein the monofunctional (meth)acrylate monomer is selected from the esters of acrylic acid, for example octyl acrylate, decyl acrylate, isobornyl acrylate, phenoxyethyl acrylate, tetrahydrofuryl acrylate, 2-(2-ethoxyethoxy) ethylacrylate, and mixtures thereof.
5. An ink-jet ink as claimed in any preceding claim, wherein the monofunctional (meth)acrylate monomer is present in an amount from 50 to 95% by weight, preferably from 60 to 80% by weight.
6. An ink-jet ink as claimed in any preceding claim, wherein the  $\alpha,\beta$ -unsaturated ether monomer is present from 1 to 30% by weight, preferably from 7 to 15%, provided that the ratio of (meth)acrylate monomer to  $\alpha,\beta$ -unsaturated ether monomer is between 2:1 and 15:1.
7. An ink-jet ink as claimed in any one of the preceding claims, wherein the  $\alpha,\beta$ -unsaturated ether monomer is a vinyl ether monomer.

8. An ink-jet ink as claimed in claim 7, wherein the vinyl ether is selected from triethylene glycol divinyl ether, diethylene glycol divinyl ether, 1,4-cyclohexanedimethanol divinyl ether, ethylene glycol monovinyl ether and mixtures thereof.

5

9. An ink-jet ink as claimed in any preceding claim, wherein the photoinitiator is a free radical photoinitiator, preferably selected from benzophenone, 1-hydroxycyclohexyl phenyl ketone, 2-benzyl-2-dimethylamino-(4-morpholinophenyl)butan-1-one, benzil dimethylketal, bis(2,6-dimethylbenzoyl)-2,4,4-trimethylpentylphosphine oxide or mixtures thereof.

10

10. An ink-jet ink as claimed in any preceding claim, wherein the photoinitiator is present from 1 to 20% by weight, preferably from 4 to 10% by weight, of the ink.

15

11. An ink-jet ink as claimed in any preceding claim, wherein the ink includes a dispersible pigment as a colouring agent.

20

12. An ink-jet ink as claimed in claim 11, wherein the dispersible pigment is present from 0.5 to 15% by weight, more preferably from 1 to 5% by weight, of the ink.

13. A method of ink-jet printing, wherein the method uses the ink-jet ink as claimed in any preceding claim.

25

14. A method as claimed in claim 13, wherein printing is carried out onto porous substrates.